

## ABSTRACT OF THE DISCLOSURE

METHODS AND APPARATUS FOR SELECTING  
PROCESSES FOR EXECUTION

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Mechanisms and techniques operate in a multiprocessing computer system having a plurality of processing devices and provide an affinity-based wakeup locality successor selection process that can identify processes to be executed by a  
10 kernel by detecting when a first process executing on a first processing device releases access to shared data. In response to the first process releasing access to the shared data, embodiments attempt to identify a second process that i) formerly executed on the first processing device and that ii) is awaiting access to the shared data. Embodiments provide, to a kernel responsible for selecting processes to execute  
15 amongst the plurality of processing devices, an identification of the second process as a process that is ready for execution in the multiprocessing computer system. Such embodiments can operate in an execution environment such as a Java Virtual Machine.